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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

AKIYAMA, Tomoyuki

Attention: Office of Petitions

Serial No.: 09/963,709

Examiner: **Dalzid E. Singh**

Filed: **September 27, 2001**

P.T.O. Confirmation No.: 1627

FOR: OPTICAL TIME-DIVISION MULTIPLEX SIGNAL PROCESSING APPARATUS AND
METHOD, OPTICAL TIME-DIVISION MULTIPLEX SIGNAL RECEIVER

PETITION TO RESET THE PERIOD FOR REPLY,
PURSUANT TO 37 CFR 1.181

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 24, 2006

Sir:

Applicant hereby petitions to reset the period for reply to the Office Action dated September 9, 2005, pursuant to 37 CFR 1.181, due to late receipt of the Office Action.

Section 710.06(I) of the Manual of Patent Examining Procedure indicates the following. The Office will grant a petition to restart the previously set period for reply to an Office Action to run from the date of receipt of the Office Action at the correspondence address when the following criteria are met:

- (A) the petition is filed within 2 weeks of the date of receipt of the Office action at the correspondence address;
- (B) a substantial portion of the set reply period had elapsed on the date of receipt (e.g., at least 1 month of a 2- or 3-month reply period had elapsed); and
- (C) the petition includes (1) evidence showing the date of receipt of the Office action at the correspondence address (e.g., a copy of the Office action having the date of receipt of the Office action at the correspondence address stamped thereon, a copy of the envelope (which contained the Office action) having the date of receipt of the Office action at the correspondence address stamped thereon, etc.), and (2) a statement setting forth the date of receipt of the Office action at the correspondence address and explaining how the evidence being presented establishes the date of receipt of the Office action at the correspondence address.

Applicant respectfully submits that the above criteria (A), (B), and (C) are satisfied by this Petition.

Regarding the above-labeled item (A):

This Petition is being filed on January 24, 2006, which is within 2 weeks of the date of receipt/acquisition of the Office Action at the correspondence address. The date of receipt/acquisition of the Office Action at the correspondence address is January 23, 2006.

Regarding the above-labeled item (B):

A substantial portion of the set reply period had elapsed on the date of receipt/acquisition. The entire 3 month period for reply had elapsed on the date of receipt/acquisition.

Regarding the above-labeled item (C):

This Petition includes (1) evidence showing the date of receipt/acquisition of the Office Action at the correspondence address. The evidence is as follows. Enclosed is a copy of the Office Action showing the date of receipt/acquisition of the Office Action at the correspondence address. A copy of an envelope is not included, because the Office Action was received/acquired by accessing the Patent Application Information Retrieval (P.A.I.R.) system of the U.S. Patent and Trademark

Office and then **printing** the Office Action utilizing the P.A.I.R. system of the U.S. Patent and Trademark Office. The Office Action was not received/acquired by U.S. Mail.

This Petition includes (2) a statement setting forth the date of receipt/acquisition of the Office action at the correspondence address and explaining how the evidence being presented establishes the date of receipt/acquisition of the Office action at the correspondence address. The statement is as follows.

The date of receipt/acquisition of the Office Action at the correspondence address is **January 23, 2006**. The Office Action was not received or acquired until January 23, 2006, as evidenced by the date of receipt/acquisition shown on the cover page of the attached copy of the Office Action. Mail received at our office is date stamped on the day such mail is received. If not received by mail, the cover page of documents initially acquired from the P.A.I.R. system of the U.S. Patent and Trademark Office are marked with the date of initial acquisition. Thus, the enclosed copy of the Office Action showing January 23, 2006 on the cover page thereof establishes the date of receipt/acquisition at our correspondence address as January 23, 2006. The P.A.I.R. system of the U.S. Patent and Trademark Office was accessed on January 23, 2006, in order to check on the status of the above-captioned application. The P.A.I.R. system was accessed on that date because no Office Action had been received from the U.S. Patent and Trademark Office even though a significant amount of time had elapsed after the date of the most recent filing. By accessing the P.A.I.R. system, it was learned that an Office Action was issued on or around September 9, 2005. However, we never received that Office Action by U.S. Mail. We acquired that Office Action on January 23, 2006 by printing the Office Action using the P.A.I.R. system. Examiner Dalzid Singh was contacted by telephone on January 23, 2006 to explain the situation and request that the period for reply be reset. Examiner Singh indicated that a petition should be filed, under these circumstances.

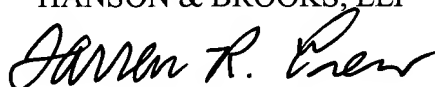
Thus, in view of the above, we respectfully request that the period for reply to the Office Action dated September 9, 2005 be restarted.

January 24, 2006

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It is understood that no fee is due with respect to this petition. However, in the event any fees are due now or in the future in connection with this application, please charge our Deposit Account No. 01-2340.

Respectfully submitted,
ARMSTRONG, KRATZ, QUINTOS,
HANSON & BROOKS, LLP



Darren R. Crew
Attorney for Applicant
Reg. No. 37,806

DRC/llf

Atty. Docket No. **011272**
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1725 K Street, N.W.
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23850

PATENT TRADEMARK OFFICE

Enclosures: Copy of Office Action dated September 9, 2005
with date of receipt/acquisition shown thereon
as: January 23, 2006



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,709	09/27/2001	Tomoyuki Akiyama	011272	1627

EXAMINER
SINGH, DALZID E

ART UNIT	PAPER NUMBER
2633	

23850 7590 09/09/2005
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP
1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006

DATE MAILED: 09/09/2005

DUE: DECEMBER 9, 2005
SECOND ACTION

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

DOCKETED	<i>See WF</i>
DATE	<i>1/23/06</i>



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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al (US Patent No. 5,926,297).

Regarding claim 6, as discussed above Ishikawa et al disclose optical communication system comprising the steps of:

providing a chirp to each of an optical time-division multiplex signal and an optical clock signal (in col. 5, lines 3-28 and Fig. 1, Ishikawa et al disclose providing chirp to the optical signal); and

detecting a beat component formed between said optical time-division multiplex signal and said optical signal provided with respective chirp (as shown in Fig. 5, it would have been obvious that the receivers detect beat component of the signal by filtering a selective frequency).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –



Office Action Summary

Application No.

09/963,709

Applicant(s)

AKIYAMA, TOMOYUKI

Examiner

Dalzid Singh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____



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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Akiyama et al (US Patent No. 6,661,974).

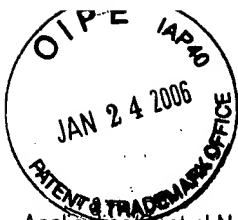
The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 8, Ishikawa et al disclose an optical time-division multiplex signal processing apparatus, shown in Fig. 72, comprising:

a first optical dispersion part (91a) supplied with an optical time-division multiplex signal and causing an optical dispersion therein;

a second optical dispersion part (91b) causing an optical dispersion therein;

a plurality of optical detectors (PD) each coupled optically to said first and second optical dispersion parts, each of said optical detectors receiving said optical time-division multiplex signal in a superposed state;



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a plurality of band-pass filters (BPF) each provided in correspondence to one of said plurality of optical detectors, each of said band-pass filters filtering out an output signal of said optical detector corresponding thereto; and

a plurality of envelop detectors each provided in correspondence to one of said plurality of band-pass filters, wherein said plurality of band-pass filters have mutually different band-pass characteristics (in Fig. 47B, Ishikawa et al shows eye diagram of the signal, therefore, it would have been obvious that there is an envelop detector to detect maximum and minimum of the signal).

Furthermore, in optical time-division multiplexed (OTDM) system it is well known that there exist clock signal transmitted along with the OTDM signal in order to provide synchronization.

Regarding claim 9, the filters as shown in Fig. 72 are provided to filter a particular frequency such as beat frequency.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US Patent No. 5,926,297).

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Regarding claim 1, Ishikawa et al disclose an optical communication system, comprising:

an optical detector (59), said optical detector detecting optical time-division multiplex signal and clock signal (in Fig. 5, Ishikawa et al show photodetector (PD) to detect the optical time-division signal and the clock signal; in col. 5, lines 3-28 Ishikawa et al disclose the transmission of OTDM signal and clock signal, which will be detected by the detector); and

a filter connected to an output terminal of said optical detector, said filter filtering out an electric signal of a desired frequency band from an output electric signal of said optical detector (Fig. 5 shows filter (62)).

Ishikawa et al disclose the transmission of optical time-division multiplex signal and clock signal and differ from the claimed invention in that Ishikawa et al do not specifically disclose optical dispersion part supplied with optical time-division multiplex signal and optical clock signal and providing optical dispersion to the optical time-division multiplex signal and optical clock signal. However, in col. 1, lines 59-67, Ishikawa et al disclose that most of transmission lines are dispersion fiber. Therefore, it would have been obvious to an artisan of ordinary skill at the time the invention was made to transmit the OTDM signal and the clock signal to transmission lines such as dispersion fiber. One of ordinary skill in the art would have been motivated to do this in order to compensate for dispersion.

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7. Claims 2-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US Patent No. 5,926,297) in view of prior art Fig. 2 discloses by applicant.

Regarding claim 2, Ishikawa et al disclose providing OTDM signal and clock signal and differ from the claimed invention in that Ishikawa et al do not specifically disclose that the dispersion part comprise of a second input end to which an optical clock signal is supplied. However, the clock signal can be coupled to another end of the coupler as suggested by Fig. 2 of the prior art. For example, a second input end could be coupled prior to the dispersion part (91a) to receive the clock signal so that the dispersion part is able to receive both clock signal and the OTDM signal.

Regarding claim 3, Ishikawa et al disclose that the dispersion medium is selected from any of a single-mode optical fiber, a diffraction grating and a prism (col. 1, lines 59-67, Ishikawa et al disclose that the dispersion is selected from dispersion shifted fiber or dispersion compensated fiber).

Regarding claim 4, as discussed above, the combination of Ishikawa et al and the prior art of Fig. 2 shows clock signal is transmitted along with OTDM signal and differ from the claimed invention in that the combination does not specifically disclose the optical coupler includes a depolarization element at said second input end. However, it would have been obvious to an artisan of ordinary skill in the art provide to provide depolarization element to the second input end. One of ordinary skill in the art would have been motivated to do this in order to reduce polarization dispersion of the signal.

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Regarding claim 7, Ishikawa et al disclose an optical transmission system, comprising:

an optical detector (59), said optical detector detecting optical time-division multiplex signal and clock signal (in Fig. 5, Ishikawa et al show photodetector (PD) to detect the optical time-division signal and the clock signal; in col. 5, lines 3-28 Ishikawa et al disclose the transmission of OTDM signal and clock signal, which will be detected by the detector);

a filter connected to an output terminal of said optical detector, said filter filtering out an electric signal of a desired frequency band from an output electric signal of said optical detector (Fig. 5 shows filter (62)); and,

an envelope detector supplied with an output signal of said filter (in Figs. 6 and 7A-7D, Ishikawa et al shows graphs of various optical signal relative to power level, therefore, it would have been obvious that there is an envelope detector to detect maximum and minimum of the signal).

Allowable Subject Matter

8. Claims 10-12 are allowed.

9. The following is an examiner's statement of reasons for allowance:

Claim 10 is allowed because the prior art US Patent No. 6,661,974 to Akiyama et al do not teach or fairly disclose plurality of optical delay elements each coupled to said second optical dispersion part, each of said plurality of optical delay elements inducing a delay in an optical clock signal supplied thereto from said second optical dispersion part.

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Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1-4 and 6-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS
September 1, 2005

David Singh